

A Privatization Primer: Issues and Evidence

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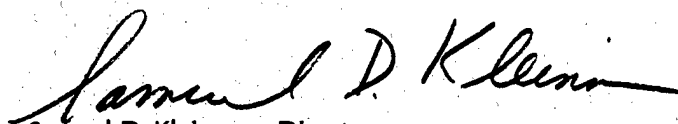
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A handwritten signature in cursive script, reading "Samuel D. Kleinman".

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Introduction and overview

Introduction

The Department of Defense (DoD) and the federal government generally, along with state and local counterparts, are trying to increase the role of the private sector in providing goods and services. The initiative is motivated by a desire to increase efficiency—that is, to do more with less—and to provide better value and service to the taxpayer. It's a particularly important initiative when budgets are falling. Sooner or later, declining budgets mean that organizations must reorganize. Some facilities must be closed, some work must be shifted, and people need to look for new ways of doing business.

There are many tools to increase efficiency, and outsourcing and privatization are only two. Any organization's goal should be to increase efficiency whether the work stays in-house or is outsourced. Improving processes and procedures to ensure that incentives promote efficient behavior is the best way to proceed, regardless of whether those improvements are tied to outsourcing, privatization, or government performance initiatives. One concern, however, is which initiative is most likely to provide those incentives in a given circumstance.

Study after study has documented the role competition can play in changing incentives and bringing efficiency. Competition provides two things: First, it provides cost visibility. Government decision-makers learn (often for the first time) what it costs to perform a function in-house. Equally important, however, is that competition also gives decision-makers choices about who performs the function. That second element is key to increased efficiency. Initiatives that foster cost visibility exclusively will provide information about costs and therefore can help managers decide whether the function needs to be provided at all. But, unless decision-makers can choose from

alternative sources, efficiency will not improve, because they cannot act on the new-found information.

Thus, competition is an important mechanism in any outsourcing or privatization decision. Requiring government customers to use a single source may not increase efficiency even if that source is privatized.

Nevertheless, there are other reasons why DoD would want to promote a greater role for the private sector. It could be a strategic decision to exit a particular line of business (with or without regard to cost). Or, DoD could want greater flexibility to respond to changing demand, because cancelling contracts are easier politically than closing installations and eliminating federal employees. The private sector can provide greater flexibility and innovation (although even that statement is questionable if DoD is contracting with a powerful single source).

Purpose of the study

This study was sponsored by the Deputy Chief of Naval Operations for Logistics (N4) who asked us to assemble the lessons learned in outsourcing and privatization. Earlier work for this study identified new opportunities for the Navy and identified initial lessons learned at a Navy technical center [1]. This study also identified specific ways to streamline the competition process required by OMB Circular A-76 [2], and initial findings of five outsourcing and competition case studies were reported in [3].

In this final report, we focus on privatization, as distinct from outsourcing. We make the distinction clearer in the body of the paper. For this report, we reviewed the economics literature to determine whether (and if so, why) public sector firms are inherently less efficient than private sector firms. We conducted case studies of the Office of Personnel Management (OPM) privatization of its background investigations unit, and the Naval Air Warfare Center (NAWC)-Indianapolis privatization. We also examined the competition program run by the City of Indianapolis for many of its city services, including the outsourcing of the local wastewater treatment

plant. Finally, we collected information on other privatizations, both in the United States and abroad.

Outsourcing (or competition) and privatization are the two practices receiving the most attention in DoD. All the services, but especially the Navy, plan to use competition aggressively to reduce the size of the support infrastructure. The Navy is also privatizing the NAWC at Indianapolis. The Air Force is privatizing two Air Logistics Centers, and has privatized its gyroscope repair center. While these efforts receive a lot of attention, there are other uses of the private sector. For example, DoD is considering simply exiting a particular line of business, such as child care or military housing. Contractors sometimes run military training programs. The Army's basic helicopter training at Fort Rucker, for example, has been run by contractors. Alternatively, the Navy could recruit trained people, rather than running schools and training programs as well. Private shipyards could perform "shake-downs" on new ships, which are jobs performed by sailors today. It's impossible to evaluate every possible use of the private sector, and so we didn't try. We did try to capture those that offered unique features to get a range of experiences.

Clarifying terms

Many use privatization and outsourcing as synonyms, or use the term privatization as a catch-all phrase to describe any new use of the private sector. Before continuing, it's useful to define terms. We use outsourcing to mean "contracting out." Outsourcing is the process of shifting functions from in-house providers to the private sector. In these cases, the workload shifts, but no government assets are transferred to the private sector. Under OMB rules in Circular A-76, work generally must be competed rather than transferred directly, so that the in-house team has a chance to retain work at which it is most efficient. An overview of the Navy's A-76 program can be found in [4]. Another form of contracting out is called direct vendor delivery, in which supplies are delivered "just-in-time" to installations directly by contractors, rather than by an in-house supply system. Another example is renting leased buildings. Vouchers and franchises are other examples. Many would include the provision of goods and services

by another government source (e.g., a Navy base getting laundry services from a Veteran's Administration hospital), but we do not.

We use the term privatization when government facilities are transferred to the private sector. The facilities can be sold to existing private firms outright, or the employees can take control in an Employee Stock Ownership Plan (ESOP). The term "privatization-in-place" is used when assets and the employees both transfer from the public to the private sector. Government facilities become contractor facilities, and public employees become contractors. We use the term privatization to include different variations of public/private ownership, such as public/private ventures, partnerships, and government-owned, contractor-operated facilities (GOCOs).

Findings

- Competition generates savings.

Competition provides a mechanism for increasing efficiency and reducing costs. Privatization and outsourcing will be successful in reducing costs if (and only if) they engender competitive mechanisms.

- Proposed privatizations often lack competitive mechanisms.

Privatization will work best when government customers can choose to use or not use the privatized installation. Also, the privatized installation should not be subsidized by the government (at least not indefinitely). Virtually every other attribute or privatization is secondary.

Most privatizations guarantee workload, and/or control the disposal of capital equipment and facilities, and/or mandate employment levels. There may be good reasons for these controls and guarantees, but cost savings and efficiencies will suffer. If such guarantees are required, they should be short-term.

- Incentives can encourage additional savings.

When the work is retained in-house, the government employees should sign a Memorandum of Understanding that looks just like a private sector contract. For example, the format used by Indianapolis

includes financial penalties for nonperformance and lets government employees keep 25 percent of savings. Those incentives led to efforts by employees to institute a process of continuous improvement.

Performance measures should constitute an important part of the contracts and the memoranda of understanding. By specifying the end product desired, (e.g., percent of the motor vehicle fleet that must be operational), workers have the incentive to focus on outputs, not inputs.

Part of creating the right incentives is having accounting tools that make costs visible. In Indianapolis, for example, introducing activity-based costing demonstrated how expensive managerial overhead costs were and helped identify some functions that should not be performed.

In addition to these three basic findings, we found a number of implementation tips. These are important for successful privatization, outsourcing, or competition.

- Employee participation is important.

For most initiatives, installation managers and workers will implement new policies, and implementing change can disrupt the organization and its employees. Successful cases had senior leadership working hard to achieve cooperation from managers and union employees who were initially skeptical of (and even hostile toward) the entire effort.

- Outsourcing emerging requirements is a practical approach.

Change is difficult to implement, in part because once an in-house capability is developed, it forms a bureaucratic constituency. For this reason, if there are areas that the DoD wants to divest, it should outsource all new requirements in those areas. For example, if DoD is considering getting out of the child care business, while it studies that issue, all new child care centers should be outsourced. In this way, DoD can avoid some painful transitions.

- Industry participation is important.

Successful outsourcing and privatization leverage off industry practices and experience. Both the Indianapolis municipal government and OPM, for example, used consultants to establish feasibility and estimate savings. Industry standards and practices can provide guidance about how to structure competition or privatization as well.

Are public enterprises inherently less efficient?

The issues surrounding outsourcing and privatization very often turn to a discussion of market characteristics. Economists have always been interested in whether (and why) public institutions or managers are less efficient than private. Thus, there is a vast literature that discusses the influence of public ownership on firm behavior and performance. In this section, we review some of that literature and combine it with our own findings. A fuller review is contained in [5]. While there is great intuitive appeal to the idea that the private sector inherently makes more efficient use of resources, the evidence is actually quite mixed.

First principles: why have public enterprises?

Economists love markets, but they do admit to a role for the public sector. In particular, public enterprises are needed to solve what economists call “market failure,” which is defined below.

- **Market failure:** Conditions (e.g., unequal information held by buyers and sellers) which prevent a market from existing and for which other markets do not compensate.

Note that the nonexistence of markets is not sufficient for this definition. There is no coal futures market, but such a market is proxied for by oil and natural gas markets and by individual contracts. Markets are said to fail when the actions of buyers and sellers do not lead to socially beneficial outcomes. One textbook example involves an individual's choice to be vaccinated. Each person chooses whether to be vaccinated by weighing the cost against the benefit of not becoming sick. What that individual does not consider is the fact that society benefits when that person is vaccinated, because that person cannot spread the disease to others. Thus, in a purely market-based system, the social benefits exceed those perceived by an individual, and too few people are vaccinated. For this reason, government can lower the

cost of vaccinations or require all school-age children to receive vaccinations to minimize disease.

Research and development provide another example. Because research results can't be exclusively preserved by the firms that perform it (although patents provide a partial safeguard), market-based firms have an incentive to underinvest in research. For them, the rewards may not justify the costs because their discoveries can be expropriated by rival firms. Thus, government funds additional research.

Government can also play a role in regulating monopolistic markets. Monopolistic markets are defined as markets in which only a single firm can produce at a profit, charging monopoly prices. More formally, we define monopoly as:

- Monopoly: A firm which has the power to set prices and exclude competitors, thereby earning high accounting profits on its assets relative to other firms which face comparable risks and have comparable advantages of location and in the talents of labor.

Thus, a local utility is a monopoly because it serves the vast majority of a local market and has the power to exclude competitors by performing regular maintenance on its extensive sunk physical capital that serves the market. Railroads and other firms that have large amounts of sunk capital relative to local markets, and that control access to that capital can be described as monopolies in the same way. We do not consider telephone companies, U.S. gas utilities, or firms that compete in international markets to be monopolies, since they do not control access to physical (or financial) capital for their competitors. U.S. electric utilities will be competitive in the future for the same reason.

Purely competitive markets, on the other hand, are typified by many producers, none of whom can prevent entry by competitors or exert influence over the selling price. Competitive markets generate the socially optimal level of output. Monopolies earn high profits by restricting output (and raising price) above the socially optimal (competitive) level. Government regulators therefore have a role in increasing output and reducing price in monopolistic markets.

Thus, the debate about outsourcing and privatization really concerns whether there is market failure; and whether we're dealing with monopolistic markets or competitive ones. If there is market failure, there is an inherent role for government intervention, and so much of the discussion concerns whether indeed markets fail in the particular service being considered.

But government has many different tools besides providing the service itself. Government may regulate private providers, collect funds (e.g., user fees, taxes, bonds), and establish entitlements. Thus, part of the debate about outsourcing or privatization is a debate about the appropriate *mechanism* for government intervention.

A final part of the debate requires resolving whether a monopoly or a more competitive situation exists. If the government is providing a service or performing a function that is available from many other private suppliers, then that function is an ideal outsourcing candidate. Outsourcing or privatizing a monopoly, on the other hand, will require continued government regulation, which may or may not increase efficiency.

In sum, economists agree that "national defense" must be provided by the government. But how government provides that defense is an open question. Many functions performed by the Defense Department today can be provided by thriving, competitive markets. Obvious examples are grounds maintenance, health services, child care, and commissaries. More controversial examples include utilities or construction (i.e., why must a naval base generate its own power?) As we'll discuss below, there are good reasons to change the ways in which government provides national defense.

Theoretical sources of public inefficiency

Many taxpayers don't perceive government institutions as promoting social welfare and fixing market failures. Instead, they see pork, perks, and inefficiency. Must government agencies be inefficient? Why or why not? There are two different approaches commonly taken by economic theory:

1. Alchian and Demsetz (1972), among others, have argued that the rewards and incentives faced by public sector managers are different from those faced by private managers [6]. For

instance, managers of public enterprises have no property rights in the assets of the enterprise. They can neither sell the enterprise nor can they own stock in the enterprise. This diminishes control over the management of these enterprises, leaving publicly owned enterprises to operate inefficiently. Public managers are less constrained from pursuing noneconomic objectives and therefore less efficient. Changing those rewards and incentives could therefore improve public sector efficiency.

2. Shapiro and Willig (1990) and Schmidt (1996) argue that the property rights view does not reflect the fact that the choice is often between a public monopoly and a regulated private monopoly [7, 8]. In their analysis of the choice between a public ownership and private regulated firms, they emphasize the informational disadvantage faced by a regulator seeking to ascertain cost and establish prices. Public enterprise is said to remedy, or at least alleviate, this informational deficiency by providing direct access to and control of the firm's information base.

Thus, economic theory has noted imperfections in both public ownership and private regulated ownership. However, these imperfections are all quite different, and there have been no strong priors concerning their relative magnitudes.

Institutional considerations

Different incentives in the public sector have given rise to different institutional practices. For example, government and private sector employers traditionally have offered different working environments. For example, performance-related pay systems such as productivity gain-sharing, profit sharing, commissions, and employee stock ownership plans are widespread in the private sector, but not in government. Most empirical research associates performance-based pay with increased labor productivity so long as management is receptive to workers' input and workplace communications are clear [9]. Savas (1992) reports that savings seen in state and local competition programs arise in part from contractors' greater use of incentive pay systems [10].

The Navy had an infant productivity gain-sharing program, but it was suspended in 1993, in part because the Naval Audit Service reported that two installations had paid out excessive or unsubstantiated bonuses [11]. It's possible that the systems were poorly designed or unsuited to the organizations. It's also possible that private sector firms need not defend their performance-related systems as much as public firms. Government has a responsibility to taxpayers to ensure that bonuses are justifiable and in line with conflict-of-interest regulations.

Civil service work rules that provide job security also contribute to inefficiency. Savas finds that for state and local governments, some savings come from contractors using younger, less senior work forces and giving first-line managers greater authority to hire and fire. However, job security and unionized employees do not, by themselves, promote inefficiency. The city of Indianapolis, for example, guaranteed the same level of job security for unionized employees. By making those employees compete for work, however, they introduced efficiency and savings.¹

Greater job security and relatively generous benefits may allow government salaries to lag comparable private sector salaries. Thus, the overall compensation package may attract different types of workers (or workers with different preferences) to different jobs. For example, risk-averse workers may value more secure jobs, and risk-taking workers may prefer aggressive dynamic companies. This is not inefficient (because the government is getting what it pays for) but is likely to contribute to perceptions and misperceptions about the federal work force.

Finally, governments are often limited in their ability to use temporary workers or part-timers, request overtime work, or rotate workers across jobs. Navy contractors with omnibus contracts routinely move

1. Many private firms such as Saturn, Eli Lilly, most of the major Japanese producers, and IBM have offered variants of "lifetime employment" because it makes good business sense. However, many of these firms (including the Japanese firms) reneged on these commitments when times got tough.

workers across locations or jobs as workload changes. They also cross-train employees, so that workers can perform a variety of jobs, which adds flexibility. Savas notes similar experiences at the state and local level. There, too, contractors provide less paid time-off and use part-timers and lower-skilled workers where appropriate.

Empirical evidence

Many studies have looked for empirical evidence of public sector productivity, and we've collected a compendium here. Most surveys of empirical literature cannot prove that the public sector is inherently less efficient than the private sector. One literature survey by Borchertding, et al. (1982) concludes:

The literature seems to indicate that 1. private production is cheaper than production in publicly owned and managed firms, and 2. given sufficient competition between public and private producers (and no discriminative regulations and subsidies), the differences in unit cost turn out to be insignificant. From this we may conclude that it is not so much the difference in the transferability of ownership but the lack of competition which leads to the often observed less efficient production in public firms [12].

Two other surveys [13, 14] also find no systematic evidence that public firms are less efficient than private firms.

One good overview of outsourcing and competition experiences is provided by Savas (1992) [10]. He notes that competition forces organizations to implement other productivity-enhancing techniques (such as performance budgeting, reorganization, or management by objective). Competition cures the inefficiencies evident in public monopolies.

What causes cost savings? In a comparison of public and private provision of eight different labor-intensive services, Stevens (1984) found that the cost savings stemmed largely from higher labor productivity and not just from lower wages [15].

That conclusion is similar to that of Donahue (1989), who concludes that the critical factor is not the form of ownership but the presence of competitive markets [16]. He writes that public versus private market matters in most studies, but competitive versus noncompetitive market usually matters more. One exception to the pattern of finding lower costs with privatization is the literature on the comparative costs of publicly and privately owned electric, gas, water, and sewage utilities. There is no consensus in these studies on which form of ownership has lower costs. The privately owned utilities are usually regulated, and public regulation can reduce the potential efficiency advantages of private ownership.

Evidence from DoD

A large body of work has documented the savings that come from competition. RAND, Brookings, and LMI, for example, have found savings ranging from 15 to 45 percent in competing functions such as housing maintenance, undergraduate pilot training, laundry, janitorial and refuse collection services, and motor vehicle maintenance. [17, 18, 19, 20]. CNA looked across all functions competed by the Navy and reported average savings of about 30 percent [4]. Similar savings have been found across DoD [21]. All these studies have argued that savings accrued whether the work remained in-house or was outsourced. That is, the competition generates the savings, rather than outsourcing per se. The public sector is not less efficient than the private, at least when forced to compete against commercial firms. CNA also found that the savings came from using people more efficiently, and not necessarily from paying people less.

In 1981, a CNA study compared the cost of overhauling submarines in public and private shipyards [22]. The researcher found that submarine overhauls in the late 1970s were cheaper in the public sector because Navy shipyards were more experienced. However, controlling for this experience advantage reversed the conclusion. In other words, costs in a private shipyard would be substantially lower than those in a similarly experienced public yard. A later study documented savings of about 30 percent for the Navy's ship and aviation depot-maintenance public/private competition program [23]. That

same study found that responsiveness and control could be provided equally well at public and private depot-maintenance facilities.

Little work has been published documenting savings or costs from privatization in DoD, in part because the experience is so new. As we discuss in a later section, however, most privatizations involve protecting the newly privatized firm from competition—at least initially. Thus, savings probably will not be as great as simply competing the workload would be.

Municipal, county, and state experiences

One perspective of nonfederal government experiences is found in Donohue (1989) although additional studies can be found in Savas (1992) [16, 10]. Donahue finds that public providers of U.S. municipal services employ 20 to 30 percent more people for a given workload than do private contractors. He argues that municipal employees are both less productive and better paid than their private counterparts. Part of the problem is the political nature of government—many, many white-collar patronage jobs provide political support but do little to produce services efficiently. But Donohue does not look at those same services under competition.

State and local studies from the economics literature

A number of empirical studies have looked at the public-versus-private supplier debate. Three articles that discuss experiences with privatization by state and local governments are discussed here.

Lopez-de-Silanes, Shleifer, and Vishny [24] use regression analysis to examine the empirical likelihood that elected county officials will order county public services to be provided by private firms instead of by county government. Since different services are provided by different levels of government, in most cases, only a small subset of counties provide a service at all.

The analysis is based on the 1987 and 1992 Census of Governments, which surveyed all 3,042 counties in the United States. Table 1 shows the services included and their percent occurrence of county provision in 1987 and 1992. There has been a slight increase in

services provided by county governments. The researchers do not discuss whether public/private competition programs were in place for any of the sample.

Table 1. County services surveyed by the 1987 and 1992 Census of Government

Service	Percent provided by counties	
	1987	1992
Landfills	52.1	53.4
Libraries	42.9	43.4
Airports	27.5	29.7
Fire protection	25.6	33.1
Hospitals	23.7	23.9
Nursing homes	21.2	21.4
Water supply	12.9	16.9
Sewage	12.5	15.1
Public transit	7.7	11.9
Stadiums	5.9	7.0
Electric utility	2.2	5.1
Gas utility	2.1	5.0

The authors find that "clean government" laws such as merit hiring, purchasing standards, and prohibitions against strikes or political activity by public employees are associated with increased outsourcing and privatization. High unionization and provisions for acquiring debt and balanced budgets are associated with decreased privatization.

High public-sector wage premiums, defined as high county/private wage ratio, are significantly associated with increased privatization for counties most likely to privatize (i.e., relatively wealthy counties), for nursing homes, and at the state (versus county or municipal) level. Lopez-de-Silanes, Shleifer, and Vishny believe that, because nursing homes are generally small relative to the size of the county market, the nursing home market is competitive, and no obvious benefit exists in centralizing nursing home care in one public facility. The authors also find that unemployment often is associated with

decreased privatization. When unemployment is high in a county, political officials will be pressured to keep public facilities open and public employees working.

The authors state "the main benefits of in-house (public) provision accrue to public employees, who are also the greatest opponents of privatization," and their results are consistent with their conclusion that political patronage limits privatization. Thus, efficiency considerations alone do not determine which functions are provided publicly versus privately in U. S. counties. They argue that there are important roles played by political patronage and by overall taxpayer resistance to government spending.

Teeple and Glyer examine water delivery systems in the Metropolitan Water District of Southern California [25]. These systems cover cities, suburbs, and rural areas and are run by both public and private entities. About 116 systems are examined using a translog cost-regression model to see whether costs are higher in public systems or private. They find no significant differences between the costs of public and private water delivery systems. These systems do have large sunk costs, so these are not competitive producers. Thus, the comparison is between public monopolies and regulated private monopolies. The authors do not examine quality of water outputs.

A third study looks at failed transportation projects in the United States [26]. Some examples given are airport privatization in Albany, New York, and an outsourced monorail line in Orlando, Florida. The latter is especially instructive because the project, though apparently financially viable, was blocked at least partly through the objections of real estate interests whose relative accessibility would be reduced by being off the path of the monorail. The authors note that expected profitability is no guarantee that a project can be outsourced or privatized successfully. In fact, the authors argue that excessive profitability is almost as much a barrier as are projected losses, because excessive profitability creates strong advocacy groups from the (prospective) big winners and big losers.

One problem with these studies is that they simply compare different jurisdictions, some of which provide services publicly, others privately. While these studies try to capture other influences in their models,

these data can be difficult to interpret. Also, these studies do not discuss the process used to select winners. Thus, it's unclear whether incumbents won competitions and whether competitive pressures remain after the initial source selection. A better way may be to examine case studies before and after outsourcing or privatization to see what happened.

Indianapolis' competition programs

The City of Indianapolis' experience with competition began in 1991 with the election of Stephen Goldsmith as mayor.² That city's experience supports the view that government organizations are not inherently inefficient; they can provide superior services given the right business tools and incentives. In Indianapolis, municipal employees are full-fledged competitors for the city's business in many functions. To be competitive, the city reduced the layers of management and oversight—thereby eliminating many patronage jobs. Union workers became active and involved participants in the competition program.

Although Goldsmith initially favored direct outsourcing, he and the American Federation of State, County, and Municipal Employees (AFSCME) union soon agreed that city workers would compete for city contracts. AFSCME won three concessions from the city. First, if competition was won by the in-house team, city workers would receive a portion of the savings in the form of performance bonuses. Second, public workers wanted a level playing field. When the city instituted activity-based costing to measure in-house costs, it became clear that bureaucratic procedures and overhead had to be reduced for the workers to be competitive. To meet the latter objective, middle management jobs were cut. The city has 43 percent fewer employees today than it did in 1991, but there have been no reductions in force (RIFs) of union employees.

2. This section is drawn from CNA internal memorandum 96-1268 "Trip to Indianapolis to review competition experience" [27].

The city has seen substantial savings from the program, and the public sector employees have won about 80 percent of the competitions they bid on.³ For example, in the first street maintenance competition, the in-house team came in with a bid that was three times lower than the best private-supplier bid and 25 percent lower than baseline costs. In competition for motor vehicle maintenance (also called fleet services), the employees reduced staff from 119 to 84, including a reduction in salaried managers from 42 to 20. Spending on fleet services was more than \$1 million less in the first year after the competition than it had been in 1991, and annual customer complaints fell from 150 to 10.

Indianapolis used industry effectively to help bring successful implementation. For example, outside consultants were hired to provide the cost accounting tools necessary to run in-house competitions. Contractors were also used to perform studies and analyses prior to competing the largest functions, and these studies were available to all interested bidders. (In one case, the study was wrong. It estimated 5- to 10-percent savings from privatizing wastewater treatment plants, which was far below the 40-percent savings actually attained). The city used requests for strategy, requests for information, and requests for proposal as ways to gather information about how to package the function and structure the contract to attract the most bidders. Under Indiana law, the RFP process (unlike formal bids) allows negotiations even after a leader is selected. City officials reported that those final negotiations nearly always strengthened the deals.

Several factors reinforce the success of the competitive process. First, when the in-house team wins, it signs a Memorandum of Understanding (MOU) with the city. The MOUs resemble contracts with private suppliers, and spell out performance standards, penalties for nonperformance, and a date for recompetition. The process is also marked by increased cooperation and willingness to compromise on the part of the city and the union. Partly as a result, union grievances have decreased dramatically.

3. Measured on a dollar-value basis, about half the work remained in-house after competition. The largest activities were won by private suppliers.

Experiences in other countries

Studies that measure the effects of privatization on performance in developing or transition countries may not be relevant to the U. S. economy. The United States has a well functioning capital market in which investors have confidence. It also has a stable legal, tax, and political system; has had no civil war for a century; and is creditworthy. This is not the case in many developing or transition countries. Hence, investors may be reluctant to risk capital in these countries, and without capital, it will be more difficult to establish a successful enterprise. Readers interested in the topic for these types of countries could read [28], or could read [29] for a look at Slovenia and [30] for a look at Russian privatization.

Often governments will establish an enterprise to produce and sell goods and services; such an enterprise is commonly referred to as a "public enterprise." Examples of such enterprises are the U. S. Postal Service, steel companies in Ireland and Holland, and Air France. But generally these enterprises will be monopolies—they will not be exposed to competitive pressures. Many authors have looked across different countries to examine whether public enterprises are less profitable than private ones in competitive markets.

Boardman and Vining (1989)

Unlike many of the studies we've discussed, one article by Boardman and Vining [31] finds that public enterprises will be less efficient than private enterprises when they operate in competitive markets. They conduct a cross-section comparison of the 500 largest industrial enterprises in the world. Because this group includes a number of public and partially privatized (or "mixed") enterprises, and because these enterprises have international sales, the authors use these data to test the comparative efficiency of private and public firms.

The authors argue that their regression results provide evidence that partially-privatized and public enterprises are inefficient relative to private enterprises. They also conclude that mixed enterprises perform worse than either wholly public or wholly private enterprises, but their evidence is not particularly strong.

One reason is that their data come from one specific year (1982). Data comparing public and private producers over time would seem more convincing. In particular, the 1982 sample is dominated by oil companies, and many oil companies had a bad year. ENI, the state-owned Italian oil company, lost \$1 billion, and Standard Oil of Ohio saw its profits fall from over \$13 billion in 1981 to under \$2 billion in 1982. Mitsubishi Oil of Japan, a private firm, also had losses of \$200 million. Oil prices did not fall, but demand of all types did fall in the 1982 recession, especially in Europe and South America, where most of the nationalized companies are located.

Also, an important issue is whether poorly performing government enterprises are more likely to be privatized. If so, then regression results may be biased or misleading, and Boardman and Vining do not test for that. Nor do they consider whether competition played a role in the privatization process. These problems make it difficult to assess whether private firms are inherently more efficient.

Gomez-Ibanez and Meyer (1993)

The same book that looked at U.S. transportation experiences also examines international experiences [26]. Contracting out urban bus operations in Britain has resulted in lower subsidy levels, lower wage levels, constant employment, constant productivity, slightly lower cost levels, and no major changes in service. According to the authors, the prime benefit in the British system is a greater willingness of private service providers to innovate.

The studies of bus transportation contracting in Britain and the United States show fairly consistent savings of about 20 percent, even when public sector costs for monitoring the private firms for contract performance are considered. Less than half of these savings usually originate from lower wage rates; the bulk comes from higher labor productivity, leaner management and overhead costs, and reduced maintenance expenses. These results are similar to those found in numerous previous studies of labor-intensive services in other sectors such as garbage collection or building maintenance, at least as long as there is competition to ensure that the private operators remain efficient. On high-performance toll highways in France, Spain, Mexico, and some nations in South East Asia, the authors note that

the main problem in getting these projects started is raising capital. Because obtaining financing rather than efficiency concerns motivates the choice of private-ownership toll roads, it is not surprising that the efficiency gains from using private expressways are small.

Vickers and Yarrow (1991)

Vickers and Yarrow [32] discuss privatization in three countries: Britain, Chile, and Poland. In Britain, natural gas and telephone services were devolved into private regulated monopolies without any restructuring. Regulation and, to some extent, efficiency have tightened since. Subsequently, electricity was radically restructured. Privatization raised revenue and served political goals of the Conservative government, but is seen as having made notable improvements in efficiency only for firms operating in competitive markets.

Privatization in Chile by the military government had four phases: 1) reversal of nationalizations by the Allende government; 2) sale for revenue of firms in which the Allende government had taken partial ownership, often to banks, which ended in crisis and renationalization in 1982 and 1983; 3) sale to individual shareholders of renationalized firms; 4) sale of firms in markets (such as electricity) which had been nationalized before the coming of the Allende government. This experience shows that the method of privatization and the institutions created are important factors.

Poland's situation is taken as similar to Chile's in the fourth phase, with additional difficulties imposed by absence of capitalist financial markets and the fact that interest groups capture the bureaucracy and use it to pursue their own vested interests.

How is privatization different from outsourcing?

Privatization issues

Privatization involves some issues that are not present in a typical outsourcing or contracting-out decision. Different forms of privatization resolve the issues in different ways. The issues can be expressed as a series of questions.

What's the goal?

Outsourcing usually results from a straightforward make-or-buy decision. Will the function be provided in-house, or will it be provided by outside contractors? The goal in outsourcing is to provide the function with greater (or the same) quality at the same (or less) cost. The goals in privatization can be less straightforward. One goal can be to create an economically viable firm where one is lacking in the market today. Another may be to reduce political problems that come from completely closing a facility. A third may be for the government to maintain greater control over the use of labor and capital than would be present in a typical outsourcing. A fourth may be to introduce better business practices and to bypass institutional constraints. Each of these goals has motivated a full or partial privatization—but the goals as a group can conflict. A privatization that is designed to keep a skilled and knowledgeable work force in place (the third goal) differs from one designed to allow hiring and firing of the formerly civil service work force.

Workload guarantees?

Regardless of the goal of privatization, a continuing issue is whether a particular level of workload is guaranteed. These guarantees are far more common in privatizations than in typical outsourcings.

Guaranteed work from the government is often seen as a way to get the new company off to a good start. It can reassure potential bidders, but obviously guaranteeing workload will limit competitive pressures toward efficiency.

Will employees get a chance to bid?

This is one issue that exists for both outsourcing and privatization. In all cases, management must decide whether the in-house performers will be allowed to bid for competed work.

Under OMB A-76 rules, most competitions for commercial activities must allow an in-house bid. The city of Indianapolis also allows in-house providers to compete, rather than simply outsourcing to private suppliers.

In-house bidding also is an issue when private firms decide to outsource. General Motor's 1995 strike resulted from disputes about whether GM had violated union agreements to let them compete before outsourcing directly.

Will employees transfer?

Will all employees automatically transfer to the new enterprise, or will each have to interview for positions? Are there restrictions on wages, compensation, or job security? Will each employee receive government severance pay before transferring? Can employees be let go?

Pension portability becomes a key part of these deals, because many employees would like to keep contributing to the federal pension system. Some privatizations have considered letting the private firm contribute to the federal system, but this generally requires special legislation. Other plans have let employees who were close to their vesting date to continue as government employees until then.

How will physical assets be treated?

Can the entire facility be sold, or will it be given away? Many privatizations overseas have sold government plants and equipment. Most of the DoD privatizations in this country, however, have transferred physical assets to state or local governments.

Related issues involve how the privatized firm can change the facility. Can the newly privatized firm dispose of assets or reduce excess capacity? Outsourcing generally transfers those input decisions to the private supplier. Often in privatization, the government maintains some control over the use of those assets. Similarly, the government may be required to upgrade or modify equipment, while the contractor simply maintains that equipment.

Other considerations

Other considerations generally concern how much risk and obligations will be retained by the government. For example, who bears any environmental risk? How long will work be guaranteed? Will subsequent contracts be competed? One issue that sometimes arises is how proprietary data from one company will be handled by another. This is a particular concern when privatizing a public depot maintenance facility.

Different ways to privatize

Privatization can take many forms. Privatization-in-place involves selling the assets to a private firm or consortium. Workers transfer from the civil service to the private sector. So-called "partial privatizations" include government-owned, contractor-operated facilities (or GOCOs), in which the government retains control of the assets but managers and workers are employed by a private company. There are a myriad of ways to make greater use of the private sector. Different forms of privatization have emerged to address different types of issues. We discuss some of the more common ones here.⁴

Federally chartered corporations

One way to privatize a good or service is to form a federally chartered corporation. There are many such corporations within the U. S. Government. These are Fannie Mae, formerly known as the Federal National Mortgage Association; the Federal Home Loan Mortgage

4. One type not discussed here is public/private ventures. Lessons learned from one Navy public/private venture can be found in [2, 33].

Corporation (Freddie Mac); and the Federal Agricultural Mortgage Corporation (Farmer Mac).

The purpose of Fannie Mae and Freddie Mac is to provide liquidity to the housing market by buying insured mortgage loans and then packaging them to sell as securities to investors. Farmer Mac raises money for farm loans in much the same way. All three organizations are government-sponsored enterprises designed to direct money to a sector of the economy that the government wants to help. They are privately owned but federally chartered corporations. They were chartered by Congress and are regulated by the Office of Federal Housing Enterprise Oversight (OFHEA). They can earn profits, must pay federal and state corporate income taxes, and can obtain operating capital by issuing common stock. However, neither organization pays property taxes. With assets of \$325 billion, Fannie Mae is considered the nation's largest investor in mortgages, buying one out of every five mortgages in the United States. Freddie Mac is also a huge national mortgage investor. All three corporations have been extremely profitable, as evidenced by the dramatic rise in the prices of their common stocks over the past several years.

Wholly owned government corporations

When a government sets up an enterprise to produce and sell goods and services, the enterprise is commonly referred to as a "public enterprise" or a wholly owned government corporation. Generally, a wholly owned government corporation has its own budget and generates revenues sufficient to cover its costs. It does not contribute to the U. S. Budget deficit and has great flexibility in how revenues are spent. An example of a wholly owned U. S. corporation is the U. S. Post Office.

Recently proposed legislation would establish another government corporation. In May 1996, a bill (H.R. 3460) known as the "Inventor Rights Protection and Patent Reform Act of 1996" was introduced in Congress to establish the Patent and Trademark Office (PTO) of the Department of Commerce as a wholly owned government corporation. Although the corporation will be under the "policy guidance" of the Secretary of Commerce, it will be a corporate body not subject to

direct supervision by any U. S. Department. All employees of the PTO would transfer to the newly formed corporation without a break in service. They will retain all original benefits, including pension rights. However, the benefits and pay of employees hired after the formation of the corporation may differ from those of the original corporate employees and workers in the Federal government.

Currently, the PTO receives more than 200,000 patent filings per year. At an average fee of \$700 per filing, the PTO generates annual revenues of nearly \$150 million in patent filing fees alone. The PTO generates additional revenue from trademark applications and from maintenance, issue, and renewal fees for both patents and trademarks. In 1994, the PTO generated revenue of \$605 million, with operating and capital costs of \$502 million and \$22.6 million, respectively. Thus, in 1994 the PTO had an excess-of-revenues over expenses of roughly \$80 million.

Unlike Fannie Mae and Freddie Mac but similar to the U. S. Post Office, the proposed PTO corporation will be a monopoly, and it will have to be regulated as such. One of the key regulatory issues is how patent and trademark filing and maintenance fees will be set. To the extent that the new fee structure produces revenues over and above capital and operating costs, these excess revenues will be retained by the PTO corporation. Hence, there will be some incentive for the PTO to operate in an efficient manner.

Determining the proper structure of the privatized PTO will require costly analysis and legal proceedings. The political climate at the time of the privatization will also influence the final design of the corporate structure. President Clinton has indicated support for this measure in campaign speeches, but it's too early to tell how much support this bill has in Congress. Even with strong support, it's anybody's guess as to when or if the PTO corporation will become a reality.

Employee Stock Ownership Plans (ESOPs)

Employee Stock Ownership Plans are relatively untested, but very promising, vehicles for privatization. In an ESOP privatization, an operation is transferred to a private firm owned by the employees who

formerly did the work for the government.⁵ In the private sector, ESOPs often arise in order to deter hostile takeovers or closures [34]. ESOPs have been a growing presence in the private sector since the mid 1970s. In 1975, there were 1,600 ESOP plans covering 248,000 workers. In 1992, there were 9,764 plans covering more than 11 million workers [35].

ESOPs confer a number of potential advantages in privatization. With an ESOP, employment is likely to be ensured, at least in the short run. Expecting their jobs to be secure, employees may be more likely to support the process. In addition, customers benefit from continued access to in-house expertise. Job security of federal employees has, however, been characteristic of privatization-in-place as well.

ESOPs also confer tax advantages that potentially provide a substantial endowment for a newly privatized firm. ESOPs differ from other business entities in that they are allowed to borrow funds to purchase company stock. When a firm repays its ESOP's debt, both the principal and the interest are tax deductible.

Although some may be concerned that employee-owned firms may be inefficient, ESOPs may in fact enhance productivity. With an ESOP, a direct financial stake in the business gives employees incentives to work smarter and harder. Some empirical studies provide evidence that firms with ESOPs are more productive than are similar firms that don't have them [36]. However, other studies show that there is no effect on productivity unless ESOPs are coupled with institutions that delegate top management decisions to employees [37].

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5. An ESOP is a defined contribution compensation plan which entitles employees to company stock. The ESOP and its portfolio are managed by a trustee. ESOPs differ from pension plans in that the latter may not invest in the employing company's stocks, and employee contributions are limited to 15 percent of total employee compensation. ESOPs permit a 25-percent investment and offer a greater tax shelter for earnings. Similar types of defined contribution plans include deferred profit sharing and stock bonus plans. With stock bonus plans, the trustee can invest in the employing company's stock to any degree.

Despite these advantages, ESOPs remain controversial. According to Blasi (1990), most ESOPs do not confer voting rights on employees, employees have no say in who the trustee is, employees rarely receive dividends, and the stocks themselves are typically a very small share of annual compensation [38]. Unions have traditionally resisted ESOPs, arguing that they weaken worker bargaining power and that they are often used as inferior substitutes for traditional fringe benefits such as pension plans, vacations, and post-retirement medical funds. Despite the fact that unions are starting to drop their traditional resistance to ESOPs, the extent to which the plans ultimately improve employee welfare is far from resolved [39].

The process of creating an ESOP may be initiated by either the original agency or by the activity that is going to be privatized. An employee association purchases the stock, which is in turn placed in trust for the employees; the trust allocates shares to individual employees in accordance with a formula that typically includes salary and seniority. When employees leave the company, they sell their shares back to the trust at their market value. Income from the sale of stock can be a good source of post-retirement income, and for this reason, ESOPs can play a pension role.⁶

Which functions are good candidates for ESOP privatization? First, by law, an ESOP must cover the lesser of 50 employees or 40 percent of all employees in the corporation. This suggests that large functions are the best candidates for ESOP privatization. Alternatively, functions could be bundled. It may also be possible for installations to jointly form ESOPs to serve a region.

Government-owned, contractor-operated facilities

GOCOs are a form of partial privatization. The management and employees become private, but the government continues to own the facilities and equipment. DoD has a long history of using GOCOs. Many of these are industrial plants that were started just after World War II. Several of these sites came under Department of Energy

6. However, ESOPs are more risky than pension plans because the portfolio is not well diversified.

(DoE) control after that department was created. It's difficult to estimate whether savings would accrue from GOCOs because there is little basis for comparison. All the current DoD and DoE GOCOs were created that way; none were transferred from public ownership and control. Also, most GOCOs have been managed by a single supplier (or two) over the past 40 years. Thus, any potential savings from competition are lacking.

GOCOs are generally used to constrain free-market forces, particularly in the way capital equipment and facilities or labor are owned and controlled by the government. However, this limits the ability of privatized facilities to compete against private firms that can optimize their operations on more dimensions. Another problem with these arrangements is that they preclude exit—an existing GOCO can't go out of business or be transformed to a different type of firm, even if doing so would be economically beneficial. Thus, the government, either implicitly or explicitly, is protecting these firms from true competition.

British GOCOs

Britain has privatized extensively (largely to offset the nationalization trends of the 1960s and 1970s). Several years ago, CNA conducted a case study of the privatization of Royal Navy dockyards, where ships are modernized, upgraded, and overhauled [40]. The Ministry of Defence (MoD) transferred two dockyards into GOCOs in 1987. Devonport Management Limited (or DML, a three-firm consortium led by the American firm Brown & Root) managed Devonport Royal Dockyard, located in southern England, and Babcock Thorn Limited won the management contract for Rosyth Naval Dockyard in Rosyth, Scotland. At the time, no private firms would bid for total ownership, so full privatization was not possible. The GOCO contract at each yard was for 7 years, with 2-year extension options.

For the British Royal Navy, these partial privatizations have reduced the cost of maintenance, increased the quality of repair, and better specified work (although all are hard to measure). Employment fell by 46 percent and 38 percent at Devonport and Rosyth, respectively. Capital usage at Devonport, measured as use of buildings, docks, and cranes, also decreased by 57 percent, 30 percent, and 35 percent,

respectively. However, workload fell as well. At Devonport, the actual workload was 50 percent less than the amount originally agreed to, and at Rosyth it was 25 percent less.

One of the main reasons why the MoD brought in contractor managements was to introduce financial controls, because dockyard managers did not know how much a particular function cost. GOCO managers instituted commercial cost accounting systems, and MoD feels that has saved a substantial amount of money. Avoiding goldplating, knowing the true cost of extra work, and resource allocation decisions have saved money as well. Also, the GOCOs are more flexible in that workers can be fired more easily. In addition, yards can now accept commercial work—their contract requires that 25 percent of their workload be non-Navy work.

In 1994, the MoD announced its intention to sell both yards outright by 1996, and full privatization is ongoing. Devonport was sold to its managing company in April 1996, and Rosyth will transfer to Babcock in the fall of 1996. (Babcock is only bidder for full ownership of Rosyth). Both yards still rely on Navy work, and guaranteed workload has been part of the negotiations. When they were GOCOs, MoD paid severance packages for redundant workers—those guarantees are not expected to continue under full privatization. Workers remain concerned that their pension and unemployment benefits will be cut under full privatization.

Privatization case studies

For this study, we conducted several case studies on privatizations to see how the government and interested parties are resolving the issues discussed above. Because many privatizations are still underway, or are relatively new, it is difficult to assess successes and failures. Nevertheless, for the older examples, we have tried to collect lessons learned.

Office of Personnel Management

In December 1994, the Clinton Administration announced that OPM would privatize its background investigation function. OPM's eventual strategy was to spin off the Office of Federal Investigations (OFI) as a private employee-owned firm. The new company, United States Investigation Services (USIS), is owned by former federal employees via an Employee Stock Ownership Plan. USIS began operations in July 1996.⁷

OFI had been a revolving fund organization which billed other federal agencies for security investigations of personnel. As of early 1996, OFI employed 750 people and performed about 40 percent of all federal background investigations. Only about 10 percent of federal background investigations were performed by private contractors. No one contractor was large enough to support the volume of activity that OFI had handled.

The \$53-million contract between USIS and OPM is sole source for 3 years, followed by two 1-year options. The contract allows USIS to seek nonfederal business, and the firm anticipates expansion into state, local, and private markets. USIS is to perform services for OPM for negotiated prices. Price decreases are built into the contract,

7. See [41] for a detailed account of the OFI privatization.

based on USIS's own cost projections. USIS's ability to generate nonfederal business is critical to generating savings from privatization [41].

One estimate of savings from privatization is for \$20 to \$30 million over 5 years [42], or about 4 to 5 percent of sales. The General Accounting Office predicts savings of \$73 million (present value terms). That estimate takes into account savings from three sources [43]:

- Lower prices (\$43 million in present value terms)
- Federal corporate income tax revenues (\$26.7 million)
- Reduced pension costs (\$12.1 million).

OPM officials found ESOP privatization advantageous for a number of reasons. The most important was that it entailed continuity for OFI's employees. The employees themselves would have job security and benefits in the form of dividends and stock value. Customers would have continued access to a staff trained in handling sensitive records in accordance with government regulations. The other alternatives were to merge all federal background investigation offices into one organization or to simply close OFI and have customers outsource the work. OPM officials rejected both options because they would have entailed disruptions in service or writing multiple contracts.

As part of the deal between OPM and the trustee, all OFI employees were to be offered jobs at USIS. OPM RIFed 706 employees in May 1996; 36 hours later, all had received job offers from USIS, and 680 accepted. All the RIFed employees received severance pay or retirement benefits, and all the employees who accepted job offers continued to do their old jobs. Severance pay amounted to \$8.4 to \$9 million, and will create a net loss of about \$5.7 million in the first year of privatization [43].

At first, OFI's employees did not support the plan [34].⁸ First, a 1994 RIF of 400 employees had contributed to a climate unfavorable to any type of dramatic change. Many OFI employees saw the RIF as part of a successful effort to regain profitability and didn't want to change course. Furthermore, some employees simply didn't believe that jobs would be

8. Later on, a majority of employees voted to pursue the plan further.

secure; many were skeptical or confused about the ESOP itself (a newsletter called *ESOPs Fables* was circulated). OPM officials told us that if they could do anything to manage the privatization differently, it would be to communicate more frequently, and earlier, with employees than they had.

The establishment of an Employee Liaison Committee helped mitigate communication problems. The committee was a conduit between employees and OPM. It consisted of 22 OFI management and staff employees; it also included two representatives from the union (the AFGE). To serve legally on the committee, members had to get waivers from government ethics laws which prohibit federal employees from lobbying to set up a business using government funds.

OPM continues to support USIS in several ways. To obviate the need for outside financing, OPM is providing capital and materials to USIS during the contract period. It is also billing customers up front and paying USIS right away. OPM's provision of supplies gives the new company some cost advantages. For example, OPM can obtain supplies at government rates, and passes those discounts on to USIS. However, as the company has been expanding, it has been using more materials than expected, and OPM has had to curtail its provision of some supplies. For its oversight and role in fostering the business, OPM gets 25 percent of the revenues that USIS generates.

Many stakeholders were convinced that background investigations were inherently governmental and that the risk to privacy and security of putting the task in private hands was grave [42]. The GAO, Congress, and others were concerned about whether the contractor would have access to critical federal, state, and local law enforcement records and facilities. On the one hand, there was concern that access would violate the Privacy Act of 1974. On the other hand, without access, a contractor would not be able to provide high-quality services. The sole source contract permits OPM to forward pertinent data to USIS, and to supervise the way USIS uses the data. Early in the process, DoE announced that USIS employees would not have full access to its facilities, but it dropped its resistance when DoD granted access [44].

OPM started its privatization in December 1994 and had spun off OFI into a private contractor by July 1996. This is a relatively fast turnaround. However, OPM did face a number of problems that delayed the process. Congress held two hearings on the privatization, which delayed the process by two months. The plan also met resistance from competing background investigation suppliers. Three suppliers (in two separate lawsuits) charged that OPM should have competed the contract.⁹ They wanted a bigger slice of the pie, but they were also concerned that OPM would transfer the 8 to 12 percent of the workload that had been performed by contractors in the past to USIS. The lawsuits were dismissed.

Despite these barriers, several factors favored a smooth transition to private operations. As a revolving fund operation, OFI started with a good sense of the costs of doing business, and the employees were experienced in running a profit-oriented business. The fact that OFI was approaching break-even status after years of losses also favored a smooth transition.

The deal between the OPM and USIS depends critically on a transfer of both workload and assets to the private sector. Central to the OFI privatization is the transfer of human capital. The ESOP was the main vehicle for the employment transition; it also created a need for OPM to provide capital and supplies in order to reduce the need for outside financing.

OPM's experience underscores the importance of frequent communication with employees throughout the process. In this case, communication was particularly important because it followed so closely on the heels of a RIF.

Although direct comparisons to the savings seen in competition and outsourcing are not possible, savings from the OFI privatization seem relatively small. Savings are estimated to be about 5 percent of sales. Previous work on Navy outsourcing shows average savings of about 30 percent of costs. There are two reasons why the privatization would

9. Earlier, OMB had approved OPM's plan to proceed without an A-76 competition.

generate fewer savings. First, the contract was not competed, in part because no single firm could have handled the volume of business that OPM demanded. Direct costs of privatizing were also high, entailing an expensive buyout of federal employees.

NAWC–Indianapolis

The Naval Air Warfare Center (NAWC)–Indianapolis conducts prototyping and engineering of new equipment designs. The majority of its workload is on avionics, but it does other types of work as well. The NAWC was considered for closure in BRAC 93, and made it onto the BRAC closure list in 95. Downsizing was already in progress; it had declined from 3,440 employees in 1991 to 2,368 in 1996.

The city of Indianapolis wanted to retain the jobs at the NAWC and looked for ways to keep the facility open. Realizing that a direct attempt to overturn the BRAC decision wasn't possible, the city struck on the alternative of creating a privatized facility that would carry on many of the functions of the closing facility. Working closely with the Navy, the city began the process of looking for a private sector partner.

As part of the BRAC process, the city was given the facility and the equipment. The city then began the process of selecting a private company to run the facility. Because the city conducted the competition, it was able to avoid federal contracting rules. The city has worked out a 10-year deal with Hughes Technical Services, a subsidiary of Hughes Aircraft. For its part, Hughes has committed to stable employment for the existing work force. Employees are guaranteed wages and benefits at least as attractive as those in their government package.¹⁰ Hughes has also promised to bring in 700 new technical jobs from elsewhere in its company. The contract between the city and Hughes also provides for minimum investments in training for NAWC employees.

10. Special legislation covering employees at the NAWC allows the Navy to extend government pension coverage to a number of employees who were near retirement vesting under the government plan.

The Navy has agreed to a 5-year deal with the facility. The Navy will guarantee a limited amount of some workload to Hughes. The workload guarantee is set at 50 percent of the anticipated workload for the facility. The contract is an indefinite-quantity contract designed to make the contracting relationship between Hughes and the Navy comparable to its existing relationship with other warfare centers. For its part, Hughes has guaranteed a 15-percent reduction in man-year rates over the 5-year contract.

The city went from solicitation in December 1995 to award in May 1996—only 6 months later. In the first 4 months, the initial responses were gathered and four finalists selected. The final selection was completed in 2 months. Contracts were completed in October 1996, and Hughes is scheduled to begin managing the facility in January 1997.

The guarantee of Navy work and the special contracting capability were critical to the completion of this deal. But the excess capacity in the Navy's technical centers that put the NAWC on the closure list still remains. The cost to the Navy of leaving excess capacity in place has not been factored into the decision. Also, guaranteeing workload to a single source means the Navy cannot receive any competitive savings—at least in the short term. On the other hand, the Navy paid no base closure costs.

The city was given the facility, its equipment, and the employees. This was a strong incentive for Hughes. In essence, the city traded the value of these assets (given at no cost by the Navy) for job guarantees and a promise of new jobs for the facility.

It is clear that the city contracting process is much less regulated than the federal process. It is clearly much faster. It's interesting to speculate on whether it provides better results. One lesson from this and other experiences at Indianapolis is that employees and management can accomplish outsourcing and privatization quickly when they want to. The history of this privatization effort example clearly points out that the multiyear process within DoD can be streamlined without a loss of quality.

Indianapolis wastewater treatment plant privatization

In January 1994, the Indianapolis municipal government signed a 5-year \$72-million contract for operations and maintenance of its two wastewater treatment facilities. These facilities employ two-stage biological-roughing filters, pure oxygen activated sludge treatment, and final effluent filtration to clean municipal water before releasing it into the White River. The combined capacity of the two sites is 250 million gallons per day.

The winning bidder was the White River Environmental Partnership (WREP), which is a consortium of JMM Operational Services, Inc.; Lyonnaise des Eaux; and IWC Resources, Inc. The city owns the buildings and equipment and is responsible for modernizing and capital improvements. JMM, a local private water supply utility, is the "prime." WREP is responsible for corrective, preventive, and predictive maintenance. Technically, WREP supplies the labor and the city provides the parts, but in actuality, WREP also keeps the inventory and buys supplies and the city pays those bills.

The whole privatization process was accomplished very quickly. The contract and competition process took about 18 months. The city government began by hiring Ernst & Young to perform a financial management analysis of the wastewater treatment plants. Early in the process, it also worked closely with the federal Environmental Protection Agency (EPA) and became an EPA national pilot site. The financial management analysis took about one year, and when it was completed, the city began developing requests for qualifications from interested firms. Seven firms submitted statements of qualifications (including the in-house management staff). Five firms were selected from that pool and asked to submit proposals. Outside contractors were hired to provide technical and financial analysis of the proposals received. Then three firms (including the in-house team) were asked to provide additional presentations and briefings, and the WREP partnership was chosen unanimously. Roughly 2 months elapsed between the decision announcement and the contract start date.

In the first year of operations, the contractor cut former city costs by 40 percent and produced savings of \$12.5 million. Employee

accidents were reduced by 70 percent and effluent violations decreased by 86 percent. One important feature of the contract is a "profit-sharing" mechanism. The city and the contractor split any increased revenues or cost reductions. This mechanism gives the contractor an incentive to come forward with new ideas to save money or generate revenues. For example, WREP proposed allowing septic tank haulers to use the facility (for a fee), and the city shares in that revenue.

The contractor hired about 60 percent of the former in-house employees, and provided job assistance, education, and counseling for the rest. Within 8 months, everyone was reemployed. Pension portability was an issue in this privatization. The people most directly affected were those who were close to vesting in the municipal pension system. The contractor arranged to lease those employees from the government until their vesting dates.

Some of the employees who were *not* hired are now performing quality assurance (QA) for the government, and there was some suggestion that those inspectors were overly zealous. The contractor views this as one part of doing business, however, and the problems are not excessive. Nevertheless, one way to avoid this type of problem is for the government to identify its QA people before the switch, so those people do not interview with the contractor. The Navy and Marine Corps have had similar situations, and the Indianapolis suggestion seems like a good one.

The contractor felt that having one European partner brought more privatization experience to the consortium. Lyonnaise des Eaux runs similar operations all over the world. The representative we spoke with also noted that the operations were sufficiently large to be "interesting." Having established an operating base there, WREP would be interested in similar facilities in surrounding states (even if they were smaller sites). It argued that a small plant near a larger facility gave a lot of flexibility in using people effectively. Thus, it could be economical to take on a small project near a large project even if that small project wouldn't be viable on its own. This observation may also be true for Navy sites. Regional bundling of a function or functions can attract a greater number of bidders.

Conclusions

Benefits and costs of privatization

Privatization is appealing for a number of reasons. First, it introduces better business and accounting practices, and it makes the facility into a self-sustaining cost center. It gets the government out of a particular line of business. It can be politically easier than simply outsourcing workload, in part because public sector workers are generally transferred in place. Also, their knowledge and skills are not lost. In the USIS privatization, for example, some were concerned that contractor employees would lack the knowledge and access to provide quality service to federal customers. Transferring an already-credentialed and trained work force is expected to mitigate these problems. Privatized facilities can be more flexible and more efficient than their government counterparts, especially if the work is not guaranteed indefinitely, if assets can be changed or disposed of, and if the facility is allowed to close if it cannot compete with private sector firms. To make the most of privatization, competitive mechanisms should be part of the process.

Yet privatization can be more costly than simply outsourcing or competing work. Establishing a private sector firm entails government costs that would not be borne if the work were competed against existing in-house or private suppliers. Also, it will not solve DoD's excess capacity problems in the way that base closure would. Moreover, it can damage the private industrial base, and private firms will resist entry by a new, government-sponsored, competitor.

What is the employment impact?

The largest potential social cost to outsourcing and privatization is unemployment. Do workers face long spells of unemployment after losing a competition, being outsourced, or being privatized? It's hard

to find definitive answers for every possible case, but we can reach some general conclusions.

In the cases of federal privatization that we studied, most employees kept their jobs, and most of the job losses were voluntary. For example, privatizations at OPM, Indianapolis, British shipyards, and other sites were met by a determination to transfer most of the employees to the contractor. Also, the proposal to privatize the Patent and Trade Office (PTO) involves moving all current employees to the new firm. Sometimes, the original employees are hired outright; other times, they are hired after a screening of their skills. At OPM, for instance, about 96 percent of the original background investigation employees moved to USIS.

Under OMB A-76, government employees who are displaced by outsourcing get the right of first refusal for jobs with the winning contractor. Traditionally, however, few government workers have chosen to transfer to the contractor, and most have transferred to other government jobs. Also, involuntary job loss tends to be small for commercial activities competitions. The average Navy A-76 competition involves 22 jobs, and the median number of employees displaced when the contractor wins is 7 [2].

Some additional evidence can be gained from the Defense Department's base closure experience. A recent study by RAND, for example, looked at the unemployment impacts of defense downsizing in southern California (which was an area hit hard). RAND found that the economy rebounded much more quickly than expected, and that unemployment was not as severe as was first feared [45]. DoD has a number of job placement programs. In coordination with federal, state, and local job programs, these have been successful in areas facing naval shipyard closures [46].

A recipe for successful privatization

Based on all the evidence we reviewed for this study, we offer a recipe for successful transportation privatization.

1. **Competition.** First, competition in the markets in which privatization firms operate is highly desirable if privatization is to succeed. Competition is especially important in encouraging the cost savings or efficiencies that often motivate privatization. Furthermore, competition reduces the risk that private firms can arbitrarily raise prices or restrict supply, thereby generating a demand for government regulation to prevent a monopoly abuse.
2. **Self-sustaining entity.** Privatization is easier when the activity or service approximately covers its costs, neither requiring significant government subsidy nor generating significant surplus. The need for subsidy is not a bar to privatization. But the need for subsidies, even if sought from private sources rather than government, greatly complicates the effort to privatize by invariably extending the nature and scope of the political discussion. It is far simpler and easier if privatization can be financed strictly from available tolls, fares, or user fees.
3. **Efficiency.** Efficiency is linked to the first two attributes, but it's worth discussing separately as well. Privatization is easier to effect when the efficiency gains from privatization are fairly large, that is, when the private sector is clearly more efficient than the public sector. Among other advantages, large gains in efficiency provide the means for buying out other problems, such as those arising from concerns about the environment or equity. Needless to say, large gains in efficiency also enhance the incentives to privatize. As a corollary, enhanced and innovative services are often as important as cost reduction in augmenting the attractiveness of privatization.
4. **No big losers.** Privatization is easier to implement when there are not too many monetary redistributions or transfers linked with the privatization. For example, social security benefits can be difficult to cut because the savings would be transferred from politically well-organized elderly to politically diffuse taxpayers. In the simplest terms, there are fewer political frictions to impede privatization when there are not too many (politically well-organized) losers due to transfers or redistributions.

5. **Few controversial issues.** Fourth, privatization works best when associated with fewer controversial consequences such as environmental concerns or general opposition to economic development or growth. The complexities created by these issues are well documented for private highways development in the United States.

The OPM privatization of background investigations, and the proposed Patent and Trade Office privatization have some of the elements for successful execution. Both charge user fees, and the PTO has been a self-sustaining cost center for years. Both entail few environmental concerns or other controversial issues. OPM had to resolve whether USIS would get access to government-held criminal databases, but the solution was straightforward. The lack of big winners and losers make both of these cases politically easier.

The two cases vary for the first criterion, however. USIS faces some competition from private investigation companies and from other public providers. Although the initial 5-year contract is sole source, OPM expects to competitively award subsequent contracts. Thus, while short-term efficiency gains are relatively small (compared to the 20 to 40 percent seen in other competition programs), USIS has the potential for greater gains in the future.

PTO, however, is the only U.S. agency that can grant patents and trademarks. And the United States is the largest grantor in the world. Thus, the proposed privatization is merely a transformation from a public monopoly to a private (regulated) one. There may be gains in operating efficiencies because certain institutional constraints are eliminated, but these gains are likely to be small, and may not outweigh increased regulatory costs.

One of the most interesting aspects of the Indianapolis experience is the way the city addressed the fourth component. Organized labor stood to be a big loser from outsourcing and privatization. By allowing unionized workers to compete with private suppliers for work, and by agreeing to reduce (nonunion) managerial overhead, Mayor Goldsmith turned the potentially big losers into big winners.

The Air Force Logistics Command depot privatizations have few of the elements of successful privatization. Depot maintenance is rarely competed. For example, the Navy often chooses to fix all F/A-18s at a particular site, and traditionally the military services have "level-loaded" depot facilities. There are potentially big losers—in particular, certain congressional representatives stand to lose large constituencies if depot workers leave the government workers' unions.

There are many controversial issues for depots. All depots have significant environmental problems, for example, and many people are concerned about turning proprietary data from the original equipment manufacturer to these nongovernment depots. Moreover, there is little room for efficiency gains. Tremendous excess capacity remains in the Air Force depot system, and the proposed privatizations do little to rationalize that capacity. If workload is guaranteed, cost savings will be relatively small. If the Air Force goal is to reduce maintenance costs and increase efficiency, a program of competing workload would seem to be more promising.

In sum, privatization will work best when government customers can choose whether or not to procure services from the privatized firm. Also, efficient privatization requires that the facility not be subsidized (directly or indirectly) by the government. Both of these components can be waived while the new firm is establishing itself, but those waivers should not last indefinitely. These two attributes are the most important. Virtually every other attribute of privatization is secondary.

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